



Memorandum

To: Erin Aleman
From: CMAP staff
Date: August 11, 2023
Subject: Regional rail

Executive summary

Northeastern Illinois is underutilizing one of its greatest infrastructure assets: a vast commuter rail network. Metra commuter rail ridership has declined for more than a decade – even before the COVID-19 pandemic upended the way regional residents move. The pandemic also accelerated the pre-existing shift toward work-from-home and other flexible work arrangements. As such, the number and frequency of traditional “9-to-5” commute trips will likely never fully return.

Peak-period and downtown-oriented trips will remain an important element of regional transit service and ridership. Even with the impacts of remote work, millions of regional residents continue to commute to and from work every day. The region’s transit network is also especially competitive for travel to and from downtown Chicago. **But these “traditional” commuter trips will make up a relatively smaller share of overall transit ridership than they did before the pandemic.** The region’s commuter rail system must adapt to this new reality to rebuild ridership amid new travel demands and better accommodate new and previously unserved travel markets.

Other regions that have faced these challenges have successfully adopted a different approach, often referred to as “regional rail.” This regional rail model would include fast, frequent, all-day transit service as part of a regionally integrated transit network. It combines the advantages offered by traditional commuter rail models (efficient movement of suburban riders to major downtown employment centers) with those of urban heavy rail (fast, affordable service that connects multiple travel markets).

Metra’s 2023 strategic plan already envisions a transition from a traditional commuter rail system to a regional rail model that provides more even, bidirectional, all-day service.¹ And this modernization message resonates with many stakeholders. Recent regional surveys show that riders desire a more flexible regional transit system that better serves destinations outside of downtown and offers more service beyond standard commute periods.² However, Metra cannot achieve this vision alone. To accelerate the adoption of regional rail within the region, CMAP recommends:

- The State should dedicate funding to support Metra’s transformation into a regional rail provider. Doing so would help Metra and the local communities it serves fund improvements throughout the six-county Regional Transportation Authority (RTA) service area. A new statewide intercity and commuter rail fund could be used for capital investments, including state of good repair (SOGR), as the region evolves toward regional rail.
- New “infill” rail stations along existing rail lines present opportunities to address rail transit access gaps and spur catalytic real estate development in more places. A dedicated funding stream from the State could fund new infill stations as well as complementary development near new or existing station areas.
- The State and its partners should consider regional rail as a fundamental outcome of ongoing and future rail system projects, inclusive of freight system investments. Integrating planning for regional rail into railroad and freight investments can yield synergistic benefits.

Regional rail investments would also benefit from and complement other PART recommendations, such as fare integration. Additional details on these complementary recommendations are available on the PART [webpage](#).

¹ Metra, My Metra Our Future Strategic Plan, 2023.

<https://metra.com/sites/default/files/MyMetraOurFutureFinal/mobile/index.html>

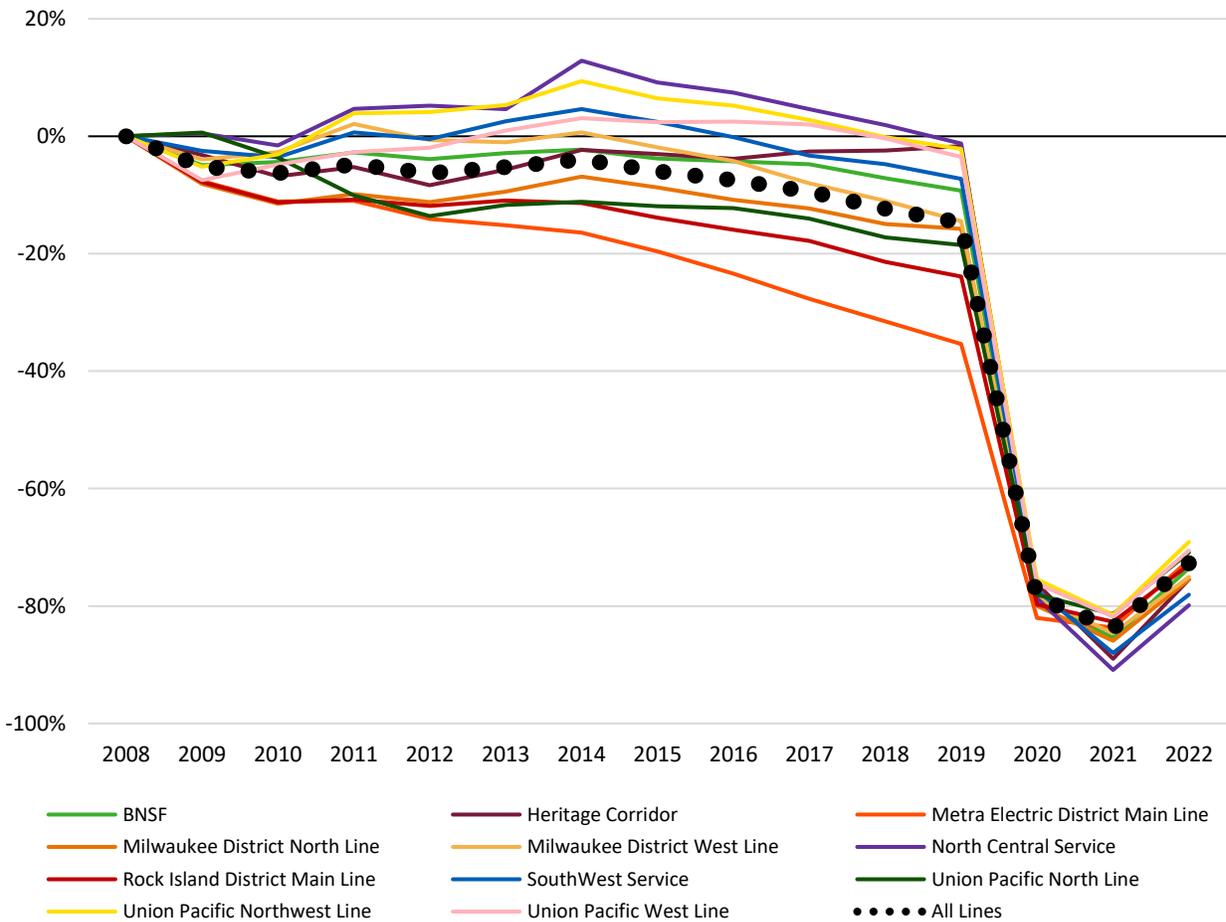
² “Transit Is the Answer” (Regional Transportation Authority, February 16, 2023),

<https://www.rtachicago.org/uploads/files/general/Region/Strategic-Plan/Final/TransitIsTheAnswer.pdf>.

The problem: Changing travel patterns have led to a mismatch between Metra’s service and the travel needs of the region.

The pandemic devastated public transit ridership across all modes and hastened changes in work and commuting habits formed over many decades. However, commuter rail in northeastern Illinois faced ridership and funding challenges even before COVID-19. Metra’s downtown-oriented service has been losing ridership since 2008, as shown in **Figure 1**, even as downtown Chicago employment (a major market for Metra) has increased in both absolute and relative terms as a share of regional employment over the same period, as shown in **Table 1**.

Figure 1. Percent change in Metra ridership compared to 2008 by year and line³



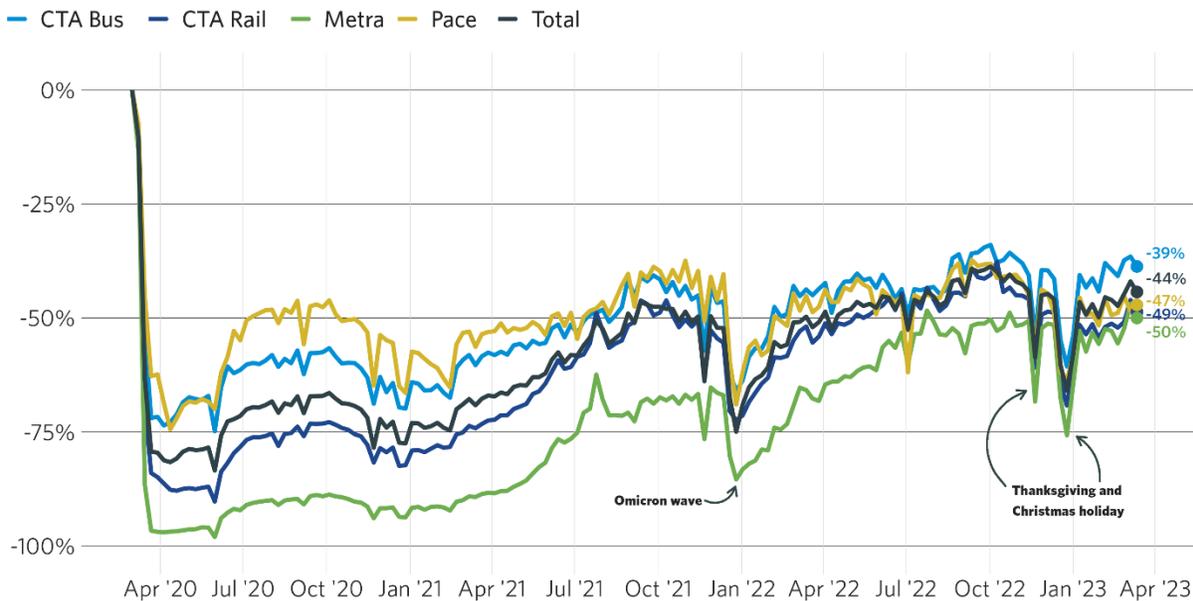
³ RTAMS, Metra Monthly Ridership by Line, Accessed 2023. <https://rtams.org/dataset/metra-ridership/resource/4524acc4-f5d0-48b2-bd52-cd8b0c4af6d1#{}>

Table 1. Downtown Chicago employment⁴

	2008	2019	2022
Regional Employment	3,443,504	3,628,442	3,520,303
Downtown Chicago Employment	520,409	619,991	604,561
Percent of Employment in Downtown	15.1%	17.1%	17.2%

Metra’s ridership experienced the most severe impact from the COVID-19 pandemic, as compared to the Chicago Transit Authority (CTA) bus and rail modes and Pace Suburban Bus. Metra saw a 75 percent decrease in ridership in 2020, compared to 65 percent for CTA rail, 49 percent for CTA bus, and 51 percent for Pace bus. Metra’s lagging ridership recovery has only recently neared that of CTA and Pace, as shown in **Figure 2**.

Figure 2. Decline in weekly transit ridership, March 2020 - March 2023



Source: CMAP analysis of RTA data through March 2023

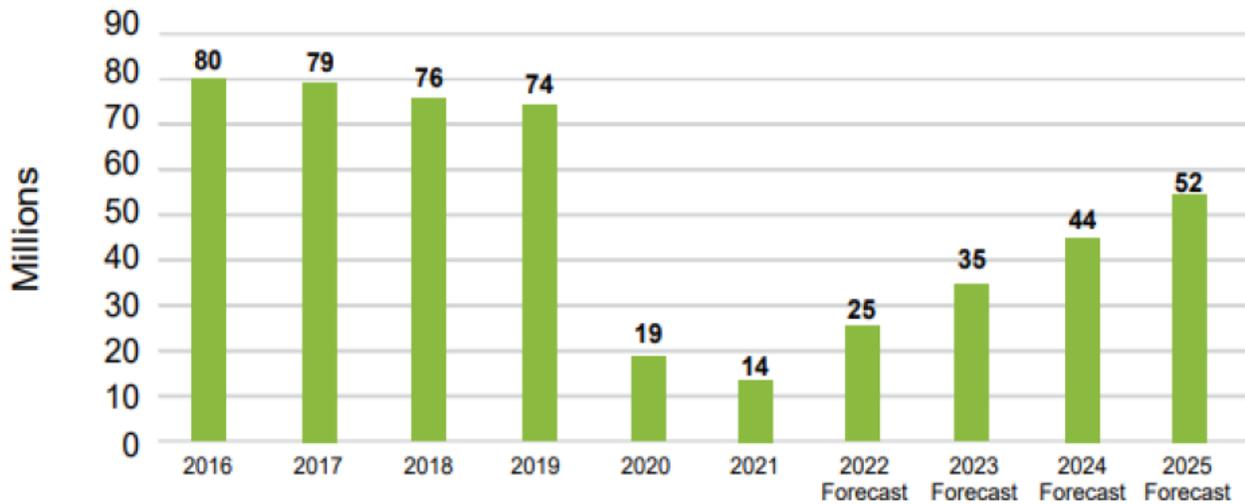
Even with a recent uptick, Metra’s ridership is only projected to recover to 70 percent of pre-pandemic levels by 2025 (**Figure 3**). Many workers have not returned to the office five days per week, which means fewer riders and less fare revenue. Because commuter rail is among the most fare reliant modes,⁵ the lack of ridership recovery acutely threatens Metra’s future financial sustainability.

⁴ Note: Employment totals are private sector only due to data limitations. “Downtown” includes the Loop and portions of Chicago’s Near North, Near West, and Near South Side community areas, in an area that extends as far as North Avenue, Ashland Avenue, 16th Street, and the lake.

Source: CMAP analysis

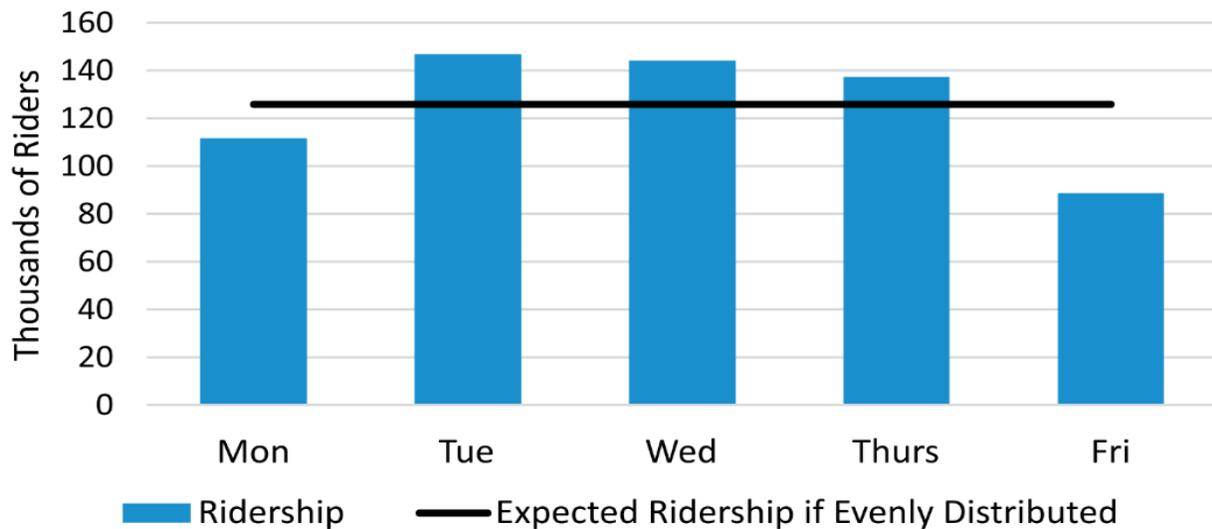
⁵ Eno Center for Transportation, The Mass Transit Fiscal Cliff: Estimating the Size and Scope of the Problem, 2022. <https://enotrans.org/article/the-mass-transit-fiscal-cliff-estimating-the-size-and-scope-of-the-problem/>

Figure 3. Historical Metra ridership and forecasts⁶



Metra customers that have returned are using the service less frequently and less consistently than before. Current weekday ridership is heavily skewed towards mid-week (**Figure 4**), suggesting flexible or remote work possibilities among Metra’s customer base. As a result, Metra may need to continue to adapt its service model to better serve new travel markets, including but not limited to off-peak and weekend riders.

Figure 4. Average weekday Metra ridership by day (January-May 2023)⁷



⁶ Metra, Proposed Operating & Capital Program & Budget, 2023. <https://metra.com/sites/default/files/inline-files/2023%20Budget%20Final%20202.pdf>

⁷ Metra, Annual and Monthly Ridership, Accessed 2023. <https://metra.com/annual-and-monthly-ridership>. Ridership numbers rounded & holidays excluded.

Service remains largely rush hour-oriented despite increasing off-peak and weekend travel

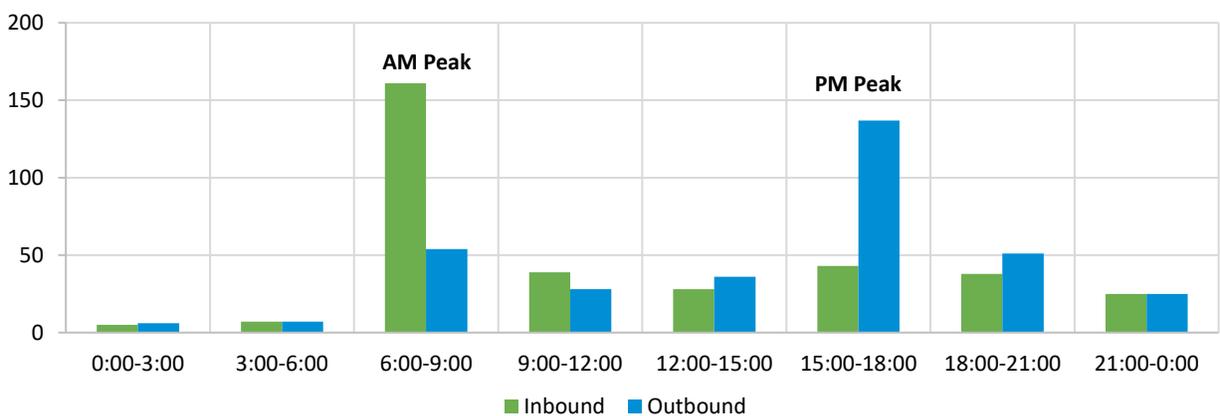
Growth in remote and hybrid work has undermined Metra’s traditional service model. In response, Metra has already taken positive steps to respond to new and emerging travel patterns on existing commuter rail lines, including the recognition that the morning peak now lasts longer and the evening peak begins earlier. Metra has invested in more midday service on some lines. In addition, Metra has collaborated to deploy pass products like the Regional Connect Pass to create a more seamless experience between transit service providers. However, room remains for growth. Metra has largely retained its commuter- and peak-focused service model, offering significantly less service during off-peak times and weekends as shown in **Figure 5**. While peak hour and weekday trips have only recovered about 50 percent, non-work trips, off-peak trips, and weekend trips have had significantly stronger recoveries, even approaching 2019 ridership in some cases, as shown in **Table 2**. Unlike weekday trips, weekend trips are spread throughout the day.⁸

Table 2. Metra's ridership recovery by time of day and day of the week (May 2023 vs May 2019)⁹

		Time of Day			
Travel Period		Peak	Reverse Peak	Midday	Evening
Percent Recovery		47%	62%	66%	52%

		Day of Week		
Travel Period		Weekday	Saturday	Sunday
Percent Recovery		51%	79%	96%

Figure 5. Metra weekday train departures by time of day, 2019¹⁰



⁸ Analysis of Ventra usage data.

⁹ Metra, May 2023 Ridership Trends, 2023. https://metra.com/sites/default/files/inline-files/May%202023%20Ridership%20Trends%20Memo_0.pdf

¹⁰ Source: Ventra usage data, 2019.

Northeastern Illinois is underutilizing great rail assets, which compounds costs

Metra’s network boasts eleven rail lines that serve six counties in Illinois and Kenosha County in Wisconsin. The system includes 1,155 track miles and 242 stations, serving 146 communities throughout the Chicago region.¹¹ The system is also expanding: two new stations are under construction in Chicago, one in Auburn Park and one in Peterson Ridge.¹² In July 2023, the State of Illinois announced a partnership between the Illinois Department of Transportation (IDOT) and Metra to restore passenger rail between Chicago and Rockford. Service is anticipated to begin in late 2027. In addition, the nearby Northern Indiana Commuter Transportation District (NICTD) South Shore Line serves Lake and Porter counties in Indiana and terminates in Chicago’s Loop.

As shown above, existing Metra service is most heavily focused on peak hour, peak direction, and downtown-oriented travel. Other trips, such as reverse commutes, intermediate trips, or travel during the evening and mid-day, are less well served, if they are served at all. As travel patterns continue to change, the existing service model will not accommodate new demands. And the current focus on a relatively narrow segment of regional travel service model not only fails to keep pace with changing travel patterns, but also leads to an underutilization of existing infrastructure assets, compounding the cost of delivering rail service.

Metra’s cost per train-mile and cost per passenger is the highest among the three service boards, as shown in **Figure 7**.¹³ Metra service is comparatively expensive to operate due to the nature of the traditional commuter rail service model, not due to inefficiencies specific to Metra. For example, Metra trips are significantly longer on average – when considering the cost per passenger mile, Metra’s expenses are much closer to those of CTA rail. Operating costs at Metra are also comparable with those of peer commuter rail agencies and national averages for commuter rail operation metrics, as shown in **Figure 8**.

Figure 6. Overview of Metra system coverage

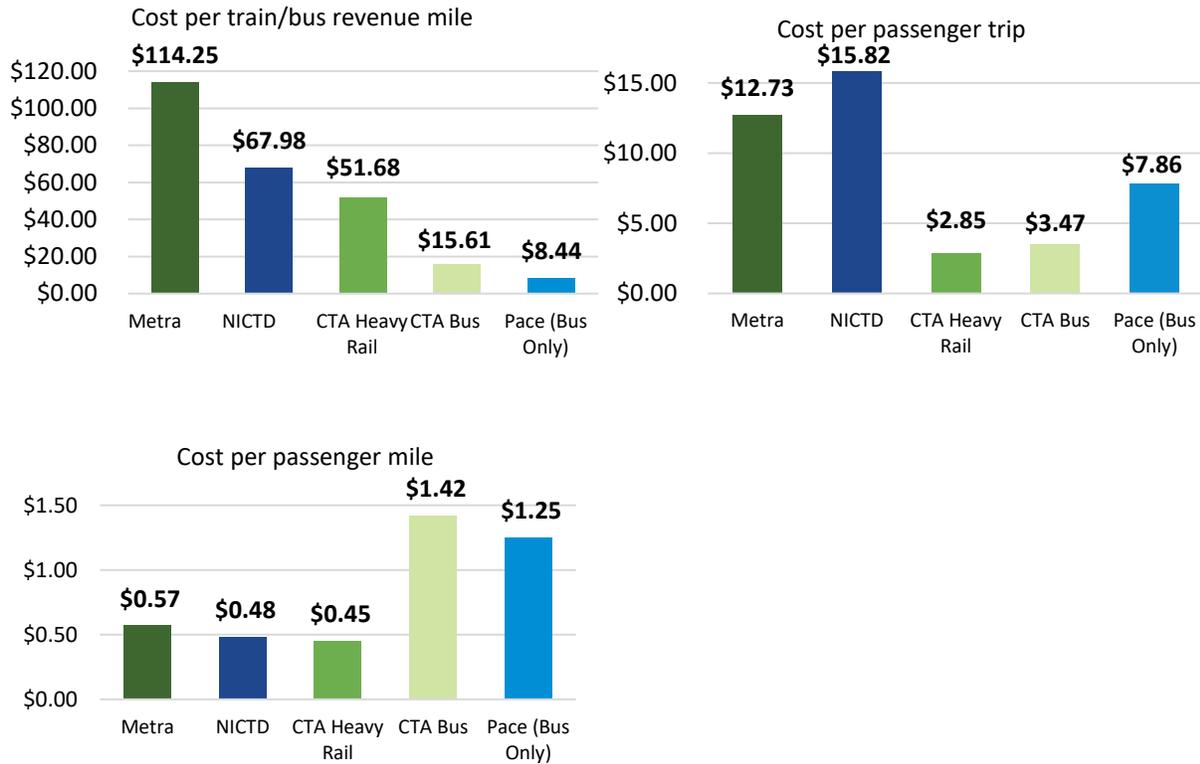


¹¹ Analysis of RTAMS data.

¹² With the two additional stations, there will be a total of 76 Metra stations within the City of Chicago’s boundaries, as well as three others (119th RI, Rosemont NCS, and Ashland ME) that immediately abut the city.

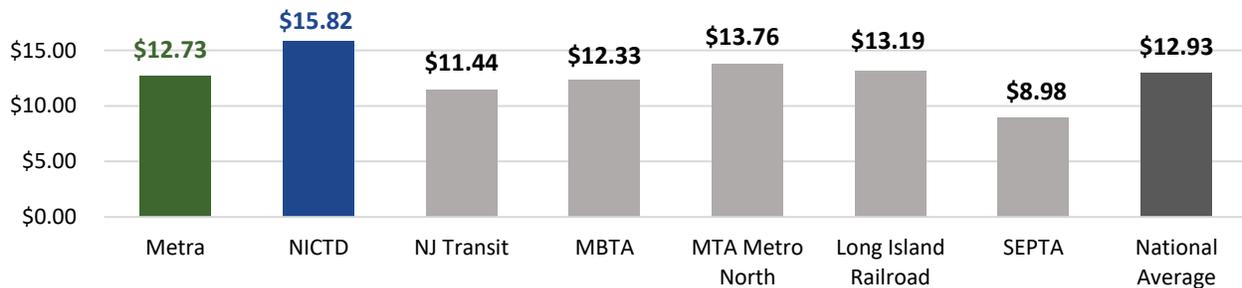
¹³ Note that that NICTD (which primarily operates in Indiana) has a higher per-passenger operating cost due to long average trip lengths, lower ridership, and a predominantly peak-oriented service. Operating costs per revenue mile that are comparatively lower than Metra are likely attributable to NICTD’s use of electric multiple unit (EMU) trains.

Figure 7. Comparison of 2019 operating costs, per revenue mile, passenger mile, and passenger trip¹⁴



Longer trips required to serve the system’s expansive multi-county reach carry a high per-passenger cost, which is accompanied by a high per-passenger subsidy. Large amounts of rolling stock are also used for only a few hours each day.¹⁵ This limited use of train sets requires large yards (including in or near downtown) and large stations to accommodate train layovers due to a lack of through-running service (see below). Attracting more short trips while preserving or improving service quality for longer trips could help bend this cost curve and grow ridership.

Figure 8. Operating cost per passenger trip among peer commuter rail agencies, 2019¹⁶



¹⁴ HNTB analysis of National Transit Database (2019 data)

¹⁵ The need for required inspections and/or servicing of Metra rolling stock and equipment mean that assets may not be available at all times.

¹⁶ HNTB analysis of National Transit Database (2019 data)

Jurisdictional barriers complicate Metra operations

Today, Metra services rely on a network with fragmented ownership and operations, including track and terminal station coordination requirements with Class I freight railroads and Amtrak. This lack of direct control and a perpetual competition for space are critical obstacles to transforming Metra's service.

Metra does not own the majority of its trackage and has limited ability to alter schedules or run additional trains, especially outside of peak hours. As shown in **Figure 9**, Metra is the sole owner, operator, and dispatcher of only two lines, Rock Island (RI) and Metra Electric (ME).

Metra owns and operates two lines -- Milwaukee District West (MD-W) and Milwaukee District North (MD-N) -- but Class I freight railroads are still responsible for dispatch activities. Metra operates on six lines, including Union Pacific North (UP-N), Union Pacific Northwest (UP-NW), Union Pacific West (UP-W), North Central Service (NCS), Heritage Corridor (HC), and SouthWest Service (SWS), where freight railroads dispatch and own the lines. Last, the BNSF -- Metra's busiest line pre- and post-pandemic¹⁷ -- is owned, operated, and dispatched by the freight railroad.

Freight congestion and interference remains a primary source of delay and disruption to Metra's services due to shared tracks with freight operators. Freight interference presents not only operational restrictions and unpredictability (which affects reliability and on time performance), but also safety challenges when rail passengers must contend with freight trains at crossings and other conflict points.

¹⁷ RTAMS, Total Rail Ridership By Line, Accessed 2023. <https://rtams.org/ridership/metra/lines>

Trackage is not the only area where Metra faces jurisdictional barriers. Metra operates most of its lines out of two terminal stations, CUS and Ogilvie Transportation Center (OTC); neither of which are solely owned or controlled by Metra. As one example, Metra trains access CUS through a trackage rights agreement. Amtrak is also looking to grow in Chicago through renovations and enhancements of CUS,¹⁹ corridor extensions and service increases,²⁰ and intercity infrastructure improvements,²¹ which will create competition for scarce capacity both at CUS and on the tracks. Amtrak is currently conducting a study to identify improvements needed at CUS to support growing intercity train volumes and Metra's transition to regional rail.²² Potential capacity concerns are being addressed in a Chicago Terminal Planning Study, as commissioned by the FRA in its Midwest Regional Rail Plan.²³ Once complete, the study will have identified infrastructure investments for improved service for both Amtrak and Metra trains.

Overall, ownership restrictions and other complex arrangements present significant, deep-seated obstacles. Lack of or fragmented terminal ownership, depicted in **Figure 10**, stymies Metra's ability to adjust scheduling and train movements. This limits the ability to deliver the customer experience Metra desires, as well as Metra's ability to implement new services that more closely align with new travel patterns and regional rail best practices.

Figure 10. Ownership of downtown Chicago rail terminals



TERMINAL	OWNER	# OF LINES
Chicago Union Station	Amtrak	6
Ogilvie Transportation Center	Union Pacific Railroad & Metra	3
Millennium Station	Metra	2
LaSalle Street Station	Metra	1

¹⁹ Amtrak, FY 2022-2027 Service and Asset Line Plans, 2022.

<https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/businessplanning/Amtrak-Service-Asset-Line-Plans-FY22-27.pdf>

²⁰ Amtrak, Amtrak Connects Us, 2021. https://media.amtrak.com/wp-content/uploads/2021/05/Amtrak-2021-Corridor-Vision-May27_2021.pdf

²¹ "Proposed MEGA Project: Chicago Hub Improvement Program" (Chicago Metropolitan Agency for Planning, September 2022), <https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/Chicago-Hub-Improvement-Program.pdf>.

²² Amtrak, Chicago Union Station (CUS) Station Operations and Infrastructure Plan (OSIP), 2023.

²³ Midwest Regional Rail Plan, FRA, 2021. <https://railroads.dot.gov/sites/fra.dot.gov/files/2021-10/Final%20Report-MWRRP%20with%20Appendices%20PDFa.pdf>

Lack of through-running service limits flexibility of operations planning

All of Metra's existing services terminate in downtown Chicago, with service beginning or ending at one of the four terminal stations shown in **Figure 10**. This model has impacts on both the rider experience and system operations.

Any regional travelers who wish to travel from an origin on one Metra line to a destination on another Metra line must transfer in the downtown area. If train schedules permit, this could involve a relatively simple transfer within either Union or Ogilvie Stations. However, it might also require travelers to connect from one downtown terminal to another, which are located up to a mile apart. And if schedules do not align, such a transfer might involve an extended wait for the next train.

From an operational perspective, the exclusive use of downtown terminal stations also increases costs and limits service flexibility. For example, rather than continuing through downtown, trains must reverse directions at the station. This adds time and limits the number of trains that a given platform or station can serve. When combined with the existing peak-period focus of system operations, the reliance on downtown terminals also requires large yards and maintenance facilities in or near downtown to accommodate trains that are laying over between runs.

Bridging the gaps between the existing downtown terminals would require significant capital investments (e.g., new rail tunnel(s) through downtown), most of which are outside the scope of the PART project. However, there are opportunities to enable through-running on at least part of the Metra network within the context of existing assets, specifically at CUS.

Half of Metra's routes operate out of CUS. Sharing the space with Amtrak trains poses operational restrictions for Metra. Currently, CUS is a double-stub ended station that lacks capacity for through-running and requires all trains to turn around at the station.

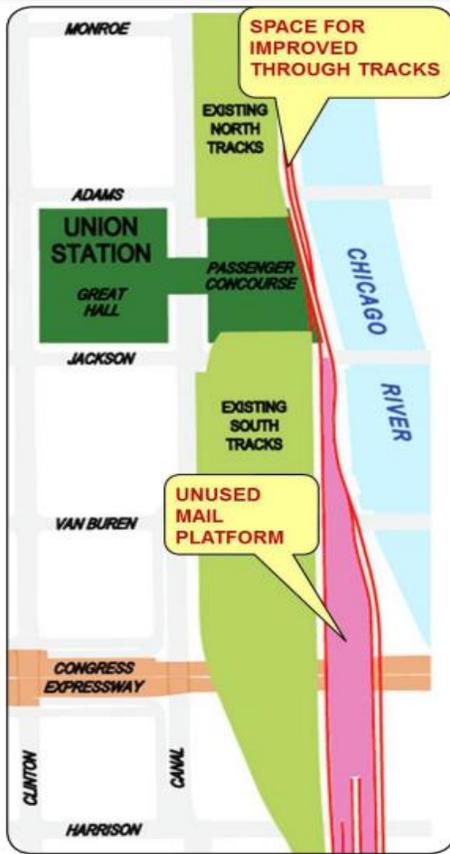
As identified in the CUS Master Plan Study²⁴ and shown in **Figure 11**, repurposing unused mail platforms for passenger platforms could allow CUS to feature through-running trains on through-service platforms. In addition, a Chicago Terminal Planning Study was awarded funding by the Federal Railroad Administration (FRA) to investigate the station's capacity for future growth and necessary infrastructure improvements. Amtrak, Metra, IDOT, and state and regional partners are also currently pursuing federal funding to support this and other complementary efforts through the Chicago Hub Improvement Program (CHIP).²⁵ These improvements are important first steps toward unlocking the benefits of through-running service that could connect the region in new and more efficient ways.

²⁴ Chicago Union Station Master Plan Study, CDOT, 2012.

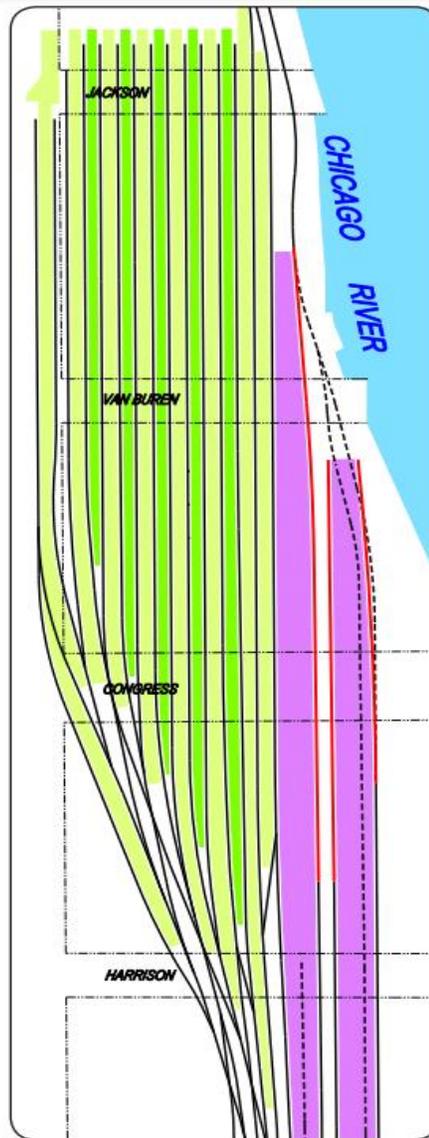
<https://www.chicago.gov/dam/city/depts/cdot/CDOTProjects/Chicago-Union-Station-Master-Plan-Study.pdf>

²⁵ "Proposed MEGA Project: Chicago Hub Improvement Program."

Figure 11. Draft mail platform concept²⁶



Converting the unused mail platform provides the opportunity to add passenger platform capacity and create new through tracks



²⁶ CDOT, Chicago Union Station Master Plan Study, 2012. chicago.gov/dam/city/depts/cdot/CDOTProjects/Chicago-Union-Station-Master-Plan-Study.pdf

Low service frequency, higher fares, and transfer fees carry equity implications for urban areas

Many Metra stations in or near Chicago serve areas where CTA rail service is unavailable, as illustrated in **Figure 12**. However, low service frequency, especially during off-peak hours, limits Metra’s usefulness for non-downtown or non-commute trips. This results in a missed opportunity for urban communities where Metra is the only rail option.

These “Metra-only” areas also tend to be disproportionately lower income and more nonwhite than those served by CTA rail (**Figure 12**), leading to access and equity implications.

In addition, these “Metra-only” communities must pay higher fares than those with CTA rail access. Transferring from Metra to other transit services (CTA, Pace) incurs an additional fare of at least \$2.00. At a minimum, Metra fares are 63 percent more expensive than CTA rail fares (\$4.00 vs. \$2.50) for a comparable trip length. This fare differential is summarized in **Table 3** and is most apparent to riders within the first four fare zones and the Chicago city limits.

Recommendations for addressing fare integration and equity in the region are also detailed in the complementary PART materials on fare integration, available on the PART [webpage](#).

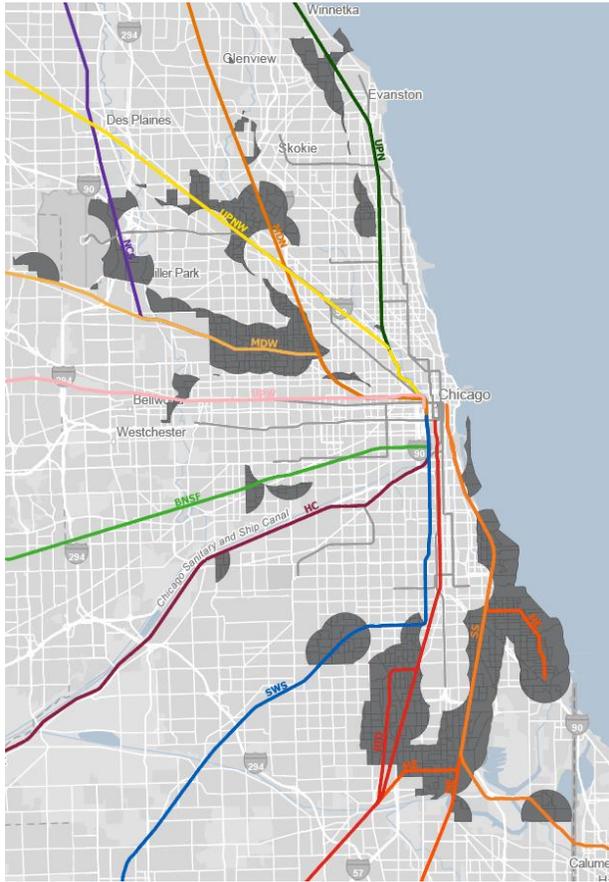
Table 3. Fares by fare zone and agency

One-way Commuter Rail Fare by Zone Pair – Metra					One-way ‘L’ Fare – CTA	One-way bus fare – CTA
	A	B	C	D	\$2.50	\$2.25
A	\$4.00	\$4.25	\$5.50	\$6.25		
B	\$4.25	\$4.00	\$4.25	\$5.50		One-way bus fare – Pace
C	\$5.50	\$4.25	\$4.00	\$4.25		\$2.00
D	\$6.25	\$5.50	\$4.25	\$4.00		

All fares mentioned above are current as of FY 2023. However, Metra has proposed a new fare structure for FY 2024 intended to simplify the fare structure and improve the rider experience. Under this new proposal, the 10 fare zones would be restructured as four fare zones, with fares set at or below pre-pandemic fares, ranging from \$3.75 - \$6.75 for a one-way trip. All Covid-era promotions (such as the \$100 “Super Saver” Monthly Pass and \$10 Day Pass) would be discontinued. Note that some of the recommendations and content included in this memo would be affected by the Metra fare proposal, if enacted.²⁷

²⁷ “Metra’s Proposed 2024 Fare Structure Modifications,” Metra, accessed August 7, 2023, <https://metra.com/2024FarePlan>.

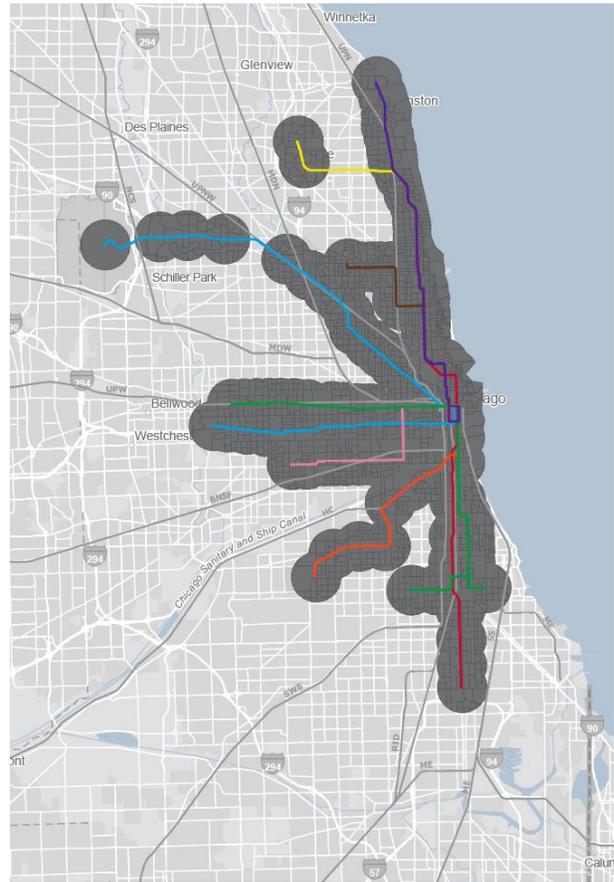
Figure 12. Areas in/near Chicago only served by Metra (no CTA rail) (left); areas served by CTA rail (right)²⁸



Metra-only areas

35% white alone

\$60,207 median household income



CTA rail areas

53% white alone

\$68,768 median household income

²⁸ The geography used for this analysis includes the entire City of Chicago, any other municipality that contains a CTA rail station, and any other block group within a one-mile buffer of a CTA rail station. This analysis area was selected to represent the entire area served by both CTA and Metra rail services. Additional information about the equity analysis is available in Appendix 1.

Regional land use and development practices could be better aligned with the success and viability of transit services.

Transit-supportive land use patterns, like dense centers of employment or housing, mixed uses and zoning types, and safe pedestrian infrastructure, are necessary for transit systems to grow their ridership base and thrive. Travelers are most likely to choose transit when it conveniently connects them from where they are to where they want to be. Without transit-supportive land use, transit systems like Metra are limited in how efficient and useful they can be – and face challenges in providing financially sustainable services in the long term.

Like other regional transit providers, Metra does not have full control over land use decisions near its stations. While Metra does own some of its station facilities and parking lots, policies like zoning and parking requirements near transit are set by local governments. Those other government agencies also often own parking lots near Metra stations, and may even own the station facilities themselves. This limits Metra’s ability to promote the kind of transit-oriented development (TOD) policies that would spur real estate development and drive ridership on regional rail.

Similarly, many parts of the region, even areas along existing rail tracks, do not have convenient access to commuter rail. Gaps in commuter rail access are common when residents live far from Metra stations, or when land uses impede access to the system (e.g., low densities, lack of sidewalk networks,²⁹ discontinuous street grid).

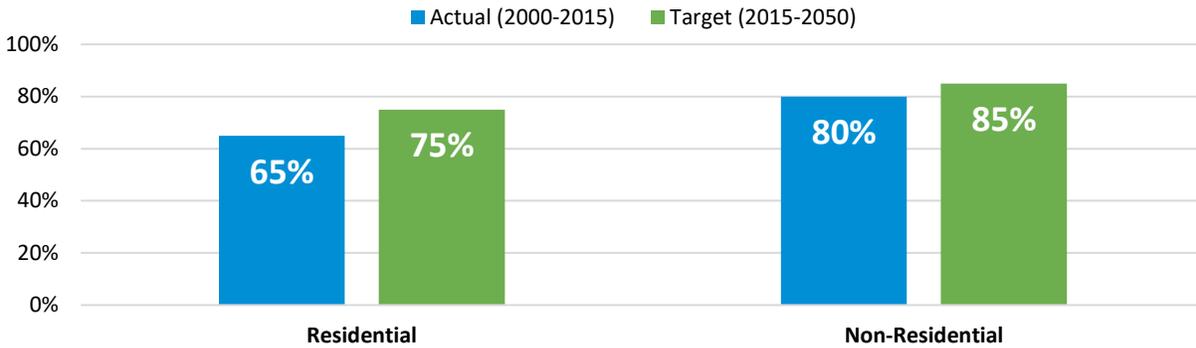
Infill stations, or new stations constructed along existing tracks, can help fill gaps in service and expand access to transit, in alignment with regional plans like CMAP’s *ON TO 2050*.³⁰ In pursuit of this, CMAP established a goal that 75 percent or more of residential units and 85 percent of non-residential construction developed since 2015 should occur within highly or partially infill supportive areas of the region, as shown in **Figure 13**.

See the companion PART [memo](#) on transit-supportive land use and development for additional recommendations on how the state and local governments could address these challenges.

²⁹ CMAP. The regional sidewalk inventory documents the existence of sidewalks in the counties of Cook, Lake, Will, Kane, Kendall, DuPage, and McHenry, as well as whether those sidewalks have a barrier or buffer from moving traffic. Accessible at: <https://datahub.cmap.illinois.gov/maps/853015db3d974e9c8b883b02f2f5fa0b/about>

³⁰ CMAP, ON TO 2050 Indicator: Share of New Development Occurring in Highly and Partially Infill Supportive Areas, Accessed 2023. <https://www.cmap.illinois.gov/2050/indicators/infill-development>

Figure 13. Share of new development occurring in highly and partially infill supportive areas in the CMAP region³¹



As the region emerges from the pandemic, Metra can play to its strengths

Implementing regional rail would require Metra and its regional partners to confront complex engineering and funding challenges while balancing equity and policy considerations. But the region can overcome these challenges, just as other regions have. With the release of the 2023 strategic plan *My Metra Our Future*, Metra has announced the start of its transition from a commuter rail service to a regional rail service. This evolution presents Metra and the region with a significant opportunity – one to make the most effective use of the region’s vast rail network, to support more sustainable communities in each of the six RTA service area counties, and to better serve travelers throughout the region.

³¹ Source: CMAP, Northeastern Illinois Development Database.

Regional context

Northeastern Illinois can and should build on progress to date. Several plans and initiatives are already underway that lay the groundwork for a regional rail model in northeastern Illinois.

My Metra Our Future (2023)

Metra recently released plans to change the way it approaches service in its 2023 strategic plan, *My Metra Our Future*. Metra plans on transitioning from a traditional commuter rail system to a regional rail model that provides more even, bidirectional, all-day service.³²

Figure 14. Excerpt from *My Metra Our Future*.

Metra is still committed to peak period service for downtown work trips, but we must also adapt to changes in rider behavior and demand. We plan to do this by moving toward a “regional rail” service model. Metra will provide service at more frequent intervals throughout the day for all trip types, and we will also explore targeted opportunities within the region to serve new, underserved ridership markets and destinations.

Commuter Rail Characteristics	Regional Rail Characteristics
Operates at a higher frequency during peak periods and a significantly lower frequency off-peak	Whenever possible, includes service at regular intervals with consistent stopping patterns throughout the day
Schedules are more oriented to twice-a-day commuters	Service is not just oriented around bringing commuters to the urban center
Midday and weekend service is relatively infrequent	Provides an all-day transportation option for all trip types throughout the region
Trains operate at specific times rather than at regular intervals	Significant service during rush-hour to meet travel demand, but less frequent peak service than traditional commuter rail

³² Metra, My Metra Our Future Strategic Plan, 2023. <https://metra.com/sites/default/files/MyMetraOurFutureFinal/mobile/index.html>

Route Restoration Study

As a part of a transition to regional rail, Metra has started a system-wide study of travel patterns to better understand new travel behavior since the pandemic began. Metra intends to make near-term improvements to service where unmet demand is found. Studies are only the first step; significant investment and funding may be needed to run increased service on certain lines and in underserved areas.

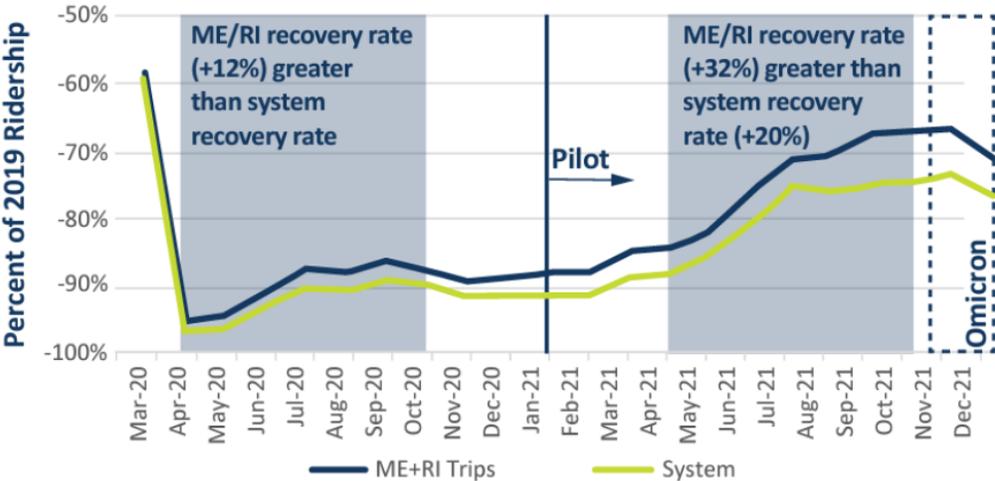
Systemwide Network Plan

Starting in 2023, the plan will recommend medium- to long-term service changes and capital improvements to Metra’s service that best respond to future travel markets based on estimates of ridership benefits, operating costs, and capital costs. In addition to serving as the long-term vision for regional rail, the plan will outline an implementation strategy that prioritizes projects and identifies funding opportunities.

Fair Transit South Cook and other fare changes

Metra is improving fare equity through the Fair Transit South Cook Pilot, which began in 2021 and offers up to 50 percent off fares on the ME and RI lines. Fair Transit South Cook has helped boost ridership recovery rates on the ME and RI lines.³³ Metra has also introduced several new pass offerings throughout 2020-2022 , including a new low-cost unlimited day pass, as well as reducing the cost of unlimited monthly passes.

Figure 15. ME+RI versus Metra systemwide ridership recovery



³³ CCDOTH, Fair Transit South Cook Pilot Program First-Year Report, 2022. https://www.cookcountyil.gov/sites/g/files/ywwepo161/files/documents/2022-05/Fair%20Transit%20South%20Cook%20First%20Year%20Report_0.pdf

Regional planning context

What does CMAP's *ON TO 2050* say?

"Local governments, CMAP, and Metra should analyze current and future parking supply and demand at rail transit stations to evaluate the potential for alternative land uses and parking allotments to enable transit-oriented development (TOD).

"CTA and Metra should prioritize addressing capacity constraints on high ridership rail lines and planning for longer term capacity increases to better serve areas of high potential within the existing rail network."

What does RTA's *Transit is the Answer* say?

"Begin evolution towards regional rail style service."

"[Make] investments in track and grade separations [that] will allow Metra to move toward a Regional Rail model, providing service at more frequent intervals throughout the day."

What are the elements of regional rail systems?

Moving toward a regional rail model, with defining characteristics outlined in **Figure 16**, could help leverage Metra’s assets. Note that not all regional rail systems incorporate these elements and not all of these elements may be possible within Metra’s system. In northeastern Illinois, it is likely that regional rail will be more of a “spectrum,” with different emphasis on different elements on different lines.

The following elements are common to regional rail systems:

- **Hybrid** between traditional commuter rail and urban heavy rail
- **Fast, frequent, all-day service**, with stations spaced closer together than typical commuter rail but farther apart than heavy rail (one to two mile spacing typical)
- **Easier transfers/connections** and **“through-running”** rather than Chicago’s current stub-end commuter rail operation at downtown stations
- **Lighter-weight rolling stock** capable of rapid acceleration and deceleration with multiple doors and low floors for efficient boarding (compared to conventional commuter rail push-pull trainsets)
- **Integrated fare collection** with other transit modes

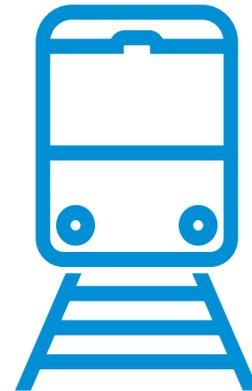
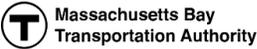


Figure 16: Defining characteristics of a regional rail model

Fast, frequent, all-day service	Nimble trains	Regional connections	Integrated, affordable fares	Everyone benefits
<p>Regular schedules that are easier to understand</p> <p>More trips outside of traditional AM inbound / PM outbound commute periods</p>	<p>Faster starts and stops</p> <p>Quicker boarding</p> <p>Lower operating cost</p> <p>Low or no emissions</p>	<p>Easier transfers</p> <p>Through-running service to destinations throughout the region – not just the Loop</p> <p>Potential neighborhood infill stations</p>	<p>Seamless mobility</p> <p>More options for getting around regardless of mode</p>	<p>Faster, streamlined service for riders in outer suburbs</p> <p>Increased frequency for those closer to Chicago’s core</p>

Examples from peer regions

Other regions and cities have started making the transition from traditional commuter rail to regional rail, including Toronto, Boston, and the Bay Area. Other systems globally, such as the Paris Réseau Express Régional (RER), can serve as models for service and planning. Additional details are available in **Appendix 2**.

Agency	Region	Key findings
	Greater Toronto Area	<ul style="list-style-type: none"> • GO Expansion provides frequent, fast, accessible, two-way, all-day service with large-scale electrification. • Service expansion will include offering more service in off-peak and weekend timeframes as well as in off-peak directions. Increased system service and capacity will be accommodated by the expansion of the central station. • Faster electric trains will be utilized to improve the speed of trips. • The project includes adding stations and improving station accessibility for passengers with disabilities.
	Boston, MA	<ul style="list-style-type: none"> • Massachusetts Bay Transportation Authority (MBTA)/Massachusetts DOT (MassDOT) evaluated how commuter rail could operate in the future and launched “Rail Vision,” which endorses electrification, higher frequency service, accessibility improvements, and lower fares. • Freight assets will be bought by MBTA/MassDOT outright for passenger rail control and to expand passenger service.
	Paris, France	<ul style="list-style-type: none"> • Paris features hybrid commuter/heavy rail with through-running service and connections to Paris Metro and commuter rail. • Fare zones are used for ticket pricing. • City zone fare is identical to the Paris Metro fare. Metro accepts the same fare media.
	Bay Area, CA	<ul style="list-style-type: none"> • The Caltrain Electrification Program features electric trains for faster service, increased capacity, ridership, and revenue with noise and emissions reduction. • Caltrain corridor will carry California High Speed Rail trains (funding/construction partnership).

What could regional rail look like in northeastern Illinois?

Peer agencies have been able to successfully implement the concept of regional rail, laying the groundwork for what similar improvements could look like for northeastern Illinois. Metra has already begun to consider potential paths forward. This section presents a vision for a regional rail service model for northeastern Illinois.

As a complementary measure, any regional rail planning effort should consider and include cross-modal connections (e.g. regional rail to heavy rail rapid transit and/or bus). See other related recommendations in the Fare Integration and Better Buses companion memos on the PART [webpage](#).

Metra could move to an inner suburban service / outer suburban service model

Given the large geographic scope of Metra’s existing service area, “improved service” could mean different things in different places. Below, this memo will explore one concept for how a regional rail approach could be implemented in the RTA region, with mutually beneficial but distinct enhancements in the urban core vs. more suburban contexts. Although this is not the only potential model for regional rail, it demonstrates the types of improvements that could be pursued, and the scale of benefits that regional travelers and communities might be able to expect.

Within the urban core, the region could pursue an *inner suburban service* (ISS) model. Riders in this region, which would include Chicago and much of suburban Cook County, would benefit from more frequent and all-day train service on existing Metra lines. For example, during mid-day, instead of trains every hour (or more), riders in this region could potentially expect Metra service every 20 minutes. To maximize their effectiveness, these changes would also be accompanied by complementary changes to regional fare policy to improve connections and the affordability of transfers between Metra and other regional transit options.

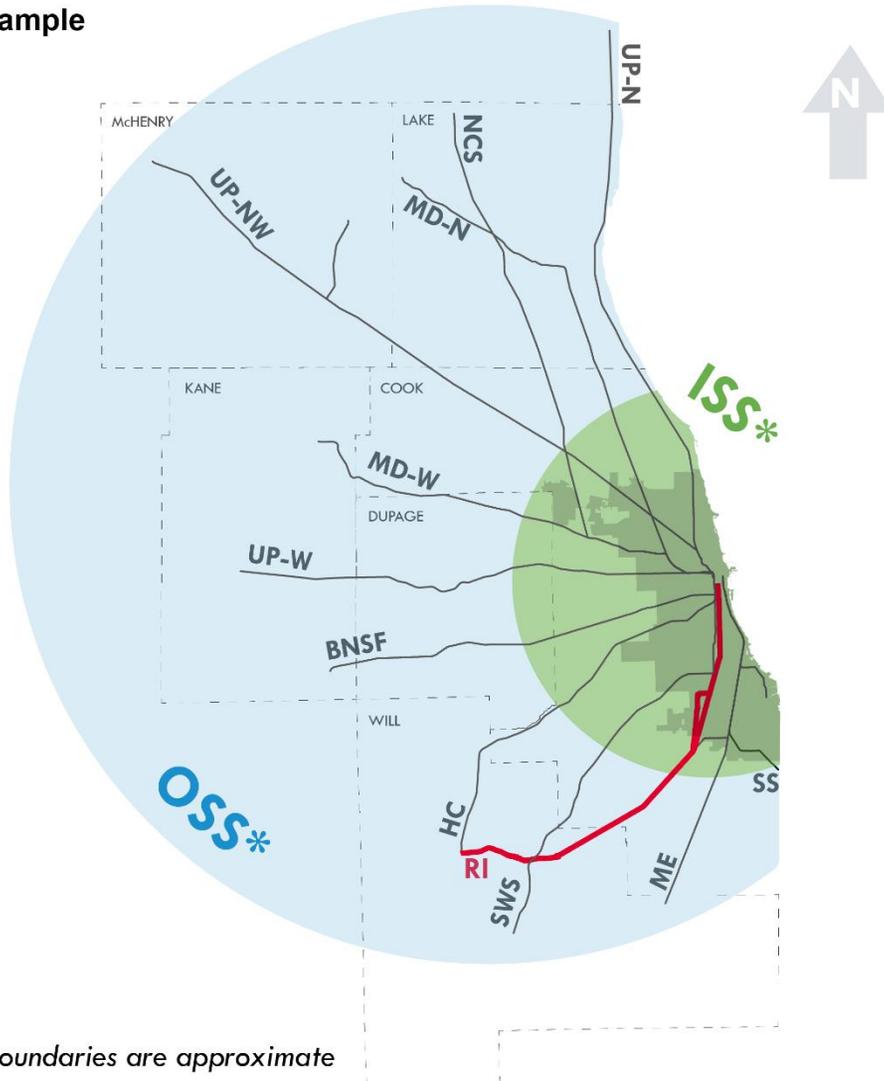
In the region’s more suburban areas, such as McHenry, Lake, Kane, DuPage, and Will counties, riders would continue to have access to the existing services upon which they have come to rely – now called the *outer suburban service* (OSS). These riders would continue to benefit from their speedy and reliable connections to major employment centers like downtown Chicago. When paired with service changes related to the ISS model, OSS trips could also be faster than before. In addition, suburban commuters would benefit from other changes, including regular or “clockface” schedules and new or improved connections to destinations throughout northeastern Illinois.

Areas that could generally be defined as inner suburban or outer suburban are shown in **Figure 17**. Note that this example is for illustrative purposes only. An exact split has not yet been defined and is subject to further study, but one conceptual example is shown for the Rock Island Line, an entirely Metra-owned, operated, and dispatched line. The green circular area

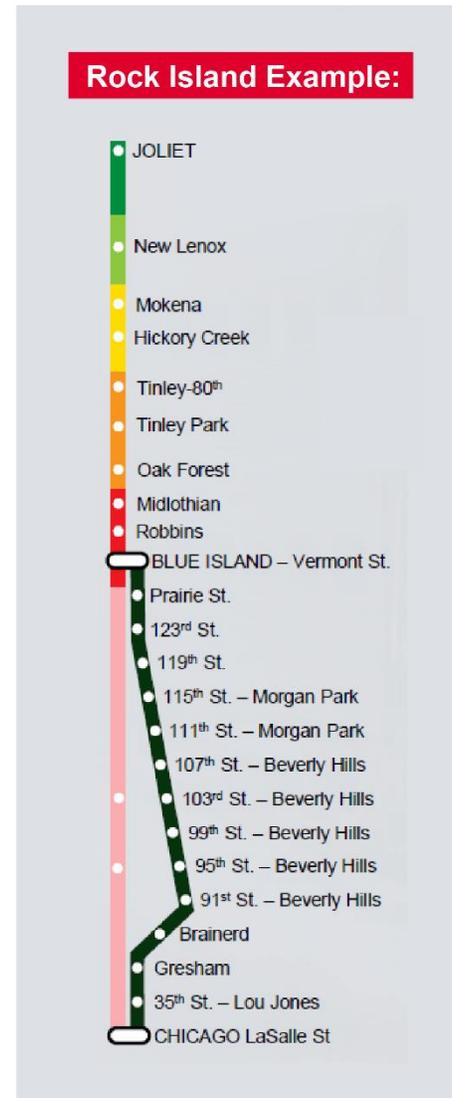
indicates a frequent, all-day, flat-fare ISS area between Blue Island and downtown Chicago, including the local stations on the Blue Island Branch. The colored segments in the gray box indicate fare zones on a less frequent, peak-oriented OSS that makes limited stops between Blue Island and Chicago, reducing travel times for commuters from suburban Cook County and Will County. Transfers between the services would be available at Blue Island.

Figure 17. Potential ISS/OSS region rail concept

Example



* Boundaries are approximate



Preliminary analyses of train schedules found that assigning a “transfer station” at the boundary of the ISS and OSS around Metra’s existing C- or D-zone stations would allow express OSS trains to downtown to be interspersed between local ISS trains operating every 20 minutes within the existing rail infrastructure.

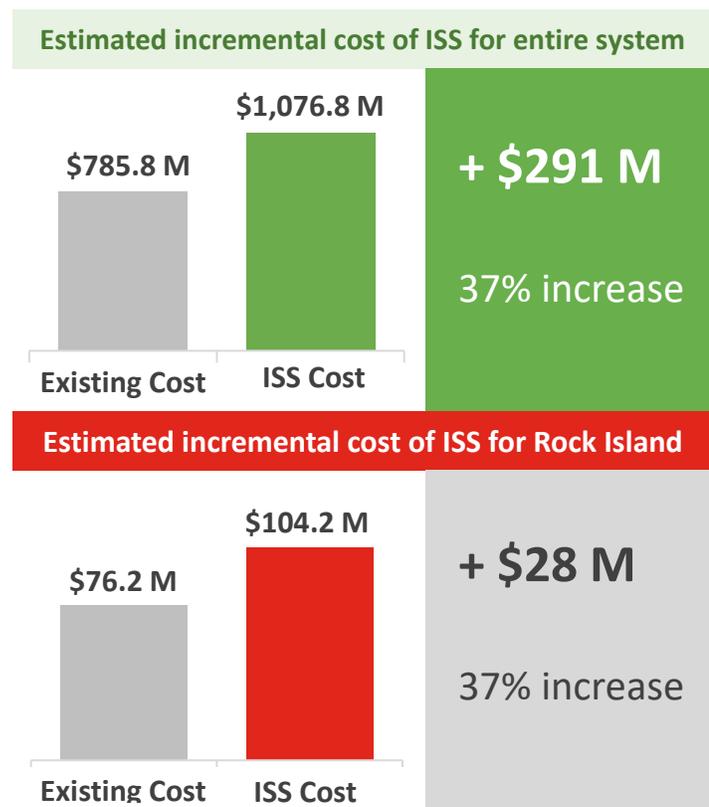
OSS service would not see the same level of frequency as ISS operations. But outer suburban service could still benefit from more regular frequency (i.e., one trip every 60 minutes), faster trips downtown, and other service enhancements (better rolling stock, improved amenities, etc.).

Increased service in the ISS area would result in additional vehicle miles, wages, fuel, etc. Key to cost-effectively implementing this type of service is the introduction of new, lightweight and scalable self-propelled multiple-unit rolling stock, such as that currently utilized on the eBART system in California, Capital MetroRail in Austin, Texas, TEXRail in Fort Worth, Texas, or the River Line in New Jersey. Operating ISS service with this type of equipment would enable Metra to provide significantly higher frequencies at a similar operating cost to its current services.

Using a more conservative operating cost estimate based on Metra’s existing equipment and unit cost structure, the additional O&M annual cost of the ISS/OSS model would be approximately \$290 million for the entire system. For the Rock Island line, the incremental cost would be approximately \$28 million, or 7.4 percent above the existing cost to operate the line.³⁴ Again, however, this is based on current Metra equipment, whereas updating Metra’s rolling stock would allow the service to operate much more cost-effectively.

All costs shown in **Figure 18** are approximate and should be considered conservative. They also do not reflect capital cost implications. Additional scoping and evaluation will be necessary to further understand cost implications.

Figure 18. Overview of preliminary operating cost estimates for ISS approach (using current Metra rolling stock)



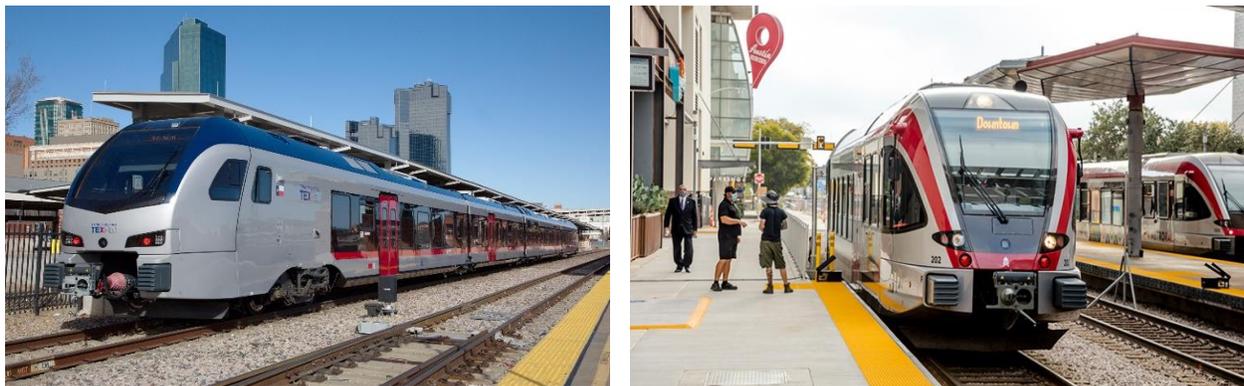
³⁴ Estimate derived from high-level analysis of O&M cost estimates based on 2019 NTD service and cost statistics for Metra and projected service levels based on assumed ISS and OSS trip frequencies.

Regional rail presents a number of benefits for northeastern Illinois

In addition to the simplification of service schedules and all-day service, the ISS and OSS model also presents an opportunity to introduce new modern trainsets to Metra's service. By procuring new, low floor rolling stock for ISS service, Metra could not only provide visual distinction between the two service models but also achieve a state of good repair (SOGR) on their rolling stock more quickly. The fleet of OSS rolling stock could also be consolidated to retire the oldest units.

Multiple-unit self-propelled trainsets considered for ISS service are twice as fast as conventional diesel trains and lighter-weight, consuming approximately 65 percent less fuel per train-mile of operation. They are easily scalable for more frequent lower-ridership off-peak trips and allow for faster boarding and alighting via more doors and low-floor, ADA compliant boarding. Recent advancements in zero emission train technology and federal support for low emission rolling stock also improves the fundability of a capital program for fleet modernization with minimal local funding match.

Figure 19. Modern railcar examples: Capital MetroRail and TEXRail³⁵



Finally, one of the more promising Metra lines for implementation of regional rail is the MD-N / NCS line between CUS and O'Hare International Airport. Regional rail could provide fast, frequent connections between two of Illinois' largest economic employment centers while serving disadvantaged neighborhoods in between that do not currently enjoy all-day, frequent rail access to jobs downtown or around the airport. In combination with improved intercity rail service in the same corridor, Chicago could offer new express services to O'Hare airport, providing additional options to complement existing CTA Blue Line service and mirroring the kinds of services available in other global cities like Toronto, London, Berlin, and Seoul.

Note that a transition in rolling stock is expected to occur over several years as existing rolling stock still has remaining useful life.

³⁵Source: Trinity Metro and CapMetro.

Figure 20. Benefits of regional rail for Metra and northeastern Illinois

- Faster travel times to downtown for Collar County riders
 - Potential to restore **express service** with lower overall train count post-COVID-19
 - New rolling stock brings **bi-level coach fleet** to state of good repair sooner
- Frequent, all-day service for Chicago and suburban Cook County riders
 - Improved travel options for **essential workers**
 - Enhanced access to the most walkable parts of the region
 - Supporting housing development near existing rail stations, including at various income levels
 - Faster service than CTA rail or CTA bus in some markets
 - Bundled **interagency transfers** reduce barriers to post-COVID-19 ridership recovery
- Minimal infrastructure requirements allow for rapid implementation
 - Single FTA New Starts grant could support multiple lines
 - Opportunity to use Cook County subsidy to offset RTA farebox recovery ratio impact
- Modernization message resonates with stakeholders
 - State of the art trainsets
 - Potential **zero emissions**
 - Better performance
 - Regional **fare integration**

Recommendations

1. Identify needs and dedicate funding to support Metra's transformation into a regional rail provider

Metra has already initiated the studies necessary to support its transition to a regional rail model. In doing so, Metra will determine specific infrastructure needs and options to implement frequent, all-day, bi-directional service.

As an undertaking of statewide significance, major changes to Metra's rail network will likely require additional capital and operational funding to address the limitations of the current network. These may include the following elements:

- New rolling stock
- New signals and track improvements, including layover tracks at ISS-OSS transfer stations³⁶
- Need for relocating and/or creating new railyards and staging yards
- New mitigations for interference with Class I freight railroads and Amtrak
- New or improved traffic and safety measures, including some grade crossing closures or grade separations where more frequent service creates excessive traffic delays
- Other SOGR investment in existing infrastructure

While the investment needed for regional rail will likely require significant funding, support from the State will maximize the value and use of our existing assets. The State's investment in regional rail would expand service and unlock mobility options without requiring significant new construction (e.g., new transit lines or extensive areas of additional track). The State could also commit matching funds to leverage significant federal grant funding opportunities, such as those under USDOT's Justice 40 initiative or other competitive grant opportunities like FTA's Capital Investment Grants (CIG) New Starts or Core Capacity programs. Because regional rail will likely be implemented in corridors in which Amtrak is also increasing service, many improvements could also be funded under intercity rail programs like FRA's Federal-State Partnership (FSP) program.

Implementation steps

Legislative actions:

- Appropriate funds and direct IDOT to leverage existing capital funds in support of passenger rail system investments (see complementary [memo](#) on "flexing" federal funds)

³⁶ The corridors leading into downtown Chicago are tightly constrained by surrounding development, limiting the potential for any ROW expansion/additional tracks without significant property impacts and cost. Therefore, it is assumed that regional rail service would be deployed within the existing ROW.

State agency actions:

- Identify linkages with state rail planning and funding support

Local/regional actions necessary to support:

- Identify priority projects to facilitate transformation (e.g., Metra Systemwide Network Plan)
- Incorporate projects into regional transit capital planning processes, subject to available funding

Rationale

- A transition to regional rail leverages existing assets. Strategic and targeted capital investments will likely cost significantly less than the wholesale construction of new transit lines.
- Metra’s continued SOGR capital investments can also yield “win-wins” to advance regional rail. Targeting financial resources towards these types of projects also helps to address the region’s significant SOGR backlog.
- Local match is often required to secure federal grants. A dedicated funding stream can help maximize access to federal dollars and draw outside funding to the region from which we would not have otherwise benefited.

Evaluation

Policy

Category	Rating	Rationale
 Mobility	High	Mitigating freight interference, relocating yards, and adding new signal and track will greatly improve mobility for people along Metra lines.
 Equity	Med	Reducing conflict between Metra and freight rail will greatly reduce congestion and improve air quality for areas where there is significant interference and dwell time. Better rail access along with investments in housing that are affordable to all income levels near regional rail stations could improve job access for disadvantaged populations. While equity benefits are not guaranteed, the hypothetical regional rail approach outlined in this memo would have significant positive equity benefits.
 Economy	High	Access to employment, education, and other opportunities are increased throughout the region. Would provide a significant increase in transit-sheds as a function of all-day transit service.
 Environment	High	A new operating model that includes investments in new and more efficient rolling stock would reduce overall system emissions (especially if accompanied by system electrification). Mode shift away from single occupancy vehicles could also reduce vehicle miles traveled (VMT).

 Regional benefit	Regional	Metra as a regional rail system will lead to improved outcomes for the region, suburbs, and city, with inner and outer suburban areas both benefitting from service improvements.
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Process

Category	Rating	Rationale
 Administrative feasibility	Med	Implementing an entirely new regional rail model in northeastern Illinois will present challenges. With the establishment of new funding sources or strategies for this program, regional rail becomes increasingly feasible.
 Political feasibility	Med	Careful coordination is needed among Metra, freight railroads, and other stakeholders to maintain a productive relationship, emphasizing that improvements will lead to mutual benefits. An increase in dedicated funding for Metra absent other transit investments (e.g., in CTA or Pace service) could lead to opposition and emphasizes the need for a comprehensive approach to transit system investments.
 Timing	Long	The process of purchasing rolling stock, relocating yards, mitigating freight interference, and improving SOGR will require several years and/or phases. However, some service-related changes could be accomplished in the near/medium term.
 State span of control	Med	The state can develop formula or grant programs to award funds and provide appropriate oversight (or delegate to RTA or Metra). Interface with several stakeholders will be necessary, including Class I railroads.

Net cost / investment

The cost estimates included below represent order-of-magnitude draft estimates. Additional scoping and evaluation will be necessary to further understand cost implications.

Improvements are expected to be implemented over an extended period. As such, near- or mid-term improvements should be as “forward compatible” as feasible.

The costs associated with this recommendation are largely driven by a subset of capital improvements required over time, including purchasing rolling stock, new signals, track improvements, improved safety measures, mitigation for freight interference, and removal/relocation of yards. Some of these costs could be accounted for in existing efforts to address the system’s state of good repair backlog, especially by replacing rail cars that are beyond the end of their useful life. However, most costs, including vehicle purchases that expand the overall fleet size, would require incremental capital expenses.

These estimates should be considered as “minimally viable” costs. A build-out of some of the more robust elements associated with regional rail, such as through-running capabilities or full system electrification, would significantly increase capital costs as compared to other elements such as rolling stock upgrades or railroad sidings.

There would likely also be a gradual increase in operating and maintenance costs due to the labor and maintenance required for new infrastructure.

Category	2025	2026	2027	2028	2029	2030
 Operations & Maintenance	\$1M	\$5M	\$10M	\$15M	\$20M	\$25M
 Capital	Costs would scale significantly depending on number of corridors and ambition. \$250M/year over approximately 10 years to implement “minimally viable” model systemwide					

2. Support station-area development and infill station opportunities to spur economic activity and address gaps in access

Accompanying the direct investment in the rail network, thoughtful policy and an integrated approach would help ensure that the region maximizes opportunities during the transformation to regional rail. As such, the State could play a role in encouraging Metra infill stations, as well as TOD and other transit-supportive land uses near commuter rail stations. The State should consider designating a funding mechanism to facilitate infill stations, as well as complementary real estate development near new infill stations and/or existing rail stations.

Doing so would serve as a force multiplier to increase access to transit, spur catalytic real estate development, improve quality of life in communities, and bolster the effectiveness of transit, while contributing to regional infill goals. Communities benefit from a virtuous cycle when land use, economic development, and transit synchronize.

Previously implemented infill rail stations in the northeastern Illinois region demonstrate the catalytic effect that infill stations often have on transit ridership and nearby economic activity. The construction of the CTA Morgan station on the Green and Pink Lines, Oakton-Skokie station on the Yellow Line, and Cermak-McCormick Place station on the Green Line all resulted in such increases.³⁷ It is likely that infill development on Metra lines would yield similar impacts, increasing Metra ridership and providing a boost to nearby development.

Metra is already pursuing infill station development in Chicago, including the Peterson Ridge Station in Edgewater on the Union Pacific North Line³⁸ and the Auburn Park Station in Auburn Gresham on the Rock Island Line.³⁹ In Chicago's bustling Fulton Market area, decisionmakers are planning for an infill Metra station that would directly serve four Metra lines.⁴⁰

³⁷ MPC, How the Cermak-McCormick 'L' station could create a real estate boom in the South Loop, 2015. <https://www.metroplanning.org/news/7199/How-the-Cermak-McCormick-L-station-could-create-a-real-estate-boom-in-the-South-Loop>

³⁸ Metra, Metra, state, and local officials break ground on new Peterson Ridge Station, 2021. <https://metra.com/newsroom/metra-state-and-local-officials-break-ground-new-peterson-ridge-station>

³⁹ Metra, Metra breaks ground on new Auburn Park Station. <https://metra.com/newsroom/metra-breaks-ground-new-auburn-park-station>

⁴⁰ CDOT and Metra, Kinzie-Fulton Market New Metra Station Community Meeting Draft, 2021. https://www.chicago.gov/content/dam/city/depts/dcd/kinzie/kinzie_fulton_market.pdf

Figure 21. Peterson Ridge and Auburn Park Metra infill stations



Land uses near transit assets, including existing Metra rail stations, could often be better aligned with the success and viability of regional transit services. Metra commuter parking represent a widespread and significant opportunity for transit-supportive redevelopments. Additional housing, employment, or recreation opportunities near stations can bolster Metra ridership and diversify trip types (such as on-work, non-downtown-oriented, reverse commute travel).

For more recommendations for how the state and local governments can support these shifts, see the companion PART [memo](#) on transit-supportive land use and development.

Implementation steps

Legislative actions:

- Consider designating a funding stream to facilitate infill station development and complementary real estate development in areas near new infill stations and existing commuter rail stations.

Local/regional actions necessary to support:

- Identify and prioritize infill station opportunities
- Integrate infill station planning with transit-supportive land use and development policies
- Implement solutions to bridge first-/last-mile gaps to make stations more accessible to more people. Options include improvements to pedestrian connections, bike share and e-scooters, shuttles and on-demand transit, and ridesharing and carpooling

Rationale

- Infill stations could close rail transit access gaps by using existing assets
- External funding is generally needed to add new Metra stations
- Serving stations along existing rail lines may lead to operating cost efficiencies

- Encouraging affordable housing development near stations in the walkable Chicago neighborhoods and inner suburbs served by frequent, all-day regional rail service will boost ridership, improve equity outcomes, and increase competitiveness for federal funding
- Infill stations could enable significant development opportunities and align with ON TO 2050 principles of infill-supportiveness

Evaluation

Policy

Category	Rating	Rationale
 Mobility	High	Closing rail transit gaps will boost mobility regionwide. Stakeholders should ensure that infill stations do not unnecessarily overlap with existing service. New rolling stock is expected to mitigate the impact of additional stops on ISS services. Express operations through the inner suburbs are expected to reduce travel times on OSS services between the collar counties and downtown Chicago.
 Equity	High	Infill stations can be placed in areas that currently have limited rail transit options, increasing access to opportunities. These investments could be focused on areas with disadvantaged communities. Their equity benefits would be magnified with complementary investments and policies that support housing development in proximity that is affordable to residents from all income levels.
 Economy	High	Infill stations typically induce catalytic effects on real estate development near station areas. More transit-sheds in the region translate to increased access to employment, housing, and other opportunities.
 Environment	Med	Adding more convenient transit service and infill stations will encourage a mode-shift to transit, causing less emissions and reducing congestion on the roads.
 Regional benefit	Suburban/ Urban	Adding more convenient transit service and infill stations across Metra's system will increase ridership in both suburban and urban areas.

Process

Category	Rating	Rationale
 Administrative feasibility	Med	Metra has already begun implementing infill stations, so the precedent for administrative work has been met; however, a larger push toward this work may involve additional staff and procedures.

 Political feasibility	Med	There may be opposition from farther-out station communities due to potential increases in travel time. There may also be opposition regarding changes in land use that could accompany infill stations. However, some concerns could be mitigated by the shifts in operating model related to an ISS-style approach.
 Timing	Med	There will need to be time spent to identify and prioritize various locations; however, infill stations typically take less time to construct compared to entirely new lines.
 State span of control	Med	The state can support infill station development through dedicated funding and guidelines.

Net cost / investment

The cost estimates included below represent order-of-magnitude draft estimates. Additional scoping and evaluation will be necessary to further understand cost implications. Improvements are expected to be implemented over an extended period.

Infill stations typically add minimal operating and maintenance costs due to their placement along lines and service. There would be some capital cost investments required for each station, although this will vary based on the site constraints.

TOD often introduces new, valuable real estate projects to a community that deliver quality housing, commercial and office space square footage, and results in improved local property and sales tax revenues. By delivering taxable development on underutilized parcels, it can yield a positive local fiscal impact.

Category	2025	2026	2027	2028	2029	2030
 Operations & Maintenance	Minimal incremental operations and maintenance (O&M) cost to Metra. Some increased costs due to longer runtimes would be offset by complementary changes (e.g., new rolling stock that can start and stop more quickly)					
 Capital	For a typical infill station, \$5M - \$50M per station depending on site constraints. Note that some more complex infill stations, e.g., in Chicago’s Fulton Market, could have significantly higher costs related to required complementary infrastructure investments.					

3. Integrate planning for regional rail into railroad and freight system investments

Freight congestion and interference pose significant barriers to expanded passenger rail service, reliability, and safety. Moving forward, key stakeholders, including the State, should consider regional rail as a fundamental outcome of ongoing and future rail system projects including freight system investments. This recommendation presents an opportunity to consider collaborative investments, as well as long-term planning and negotiation in northeastern Illinois.

Planning for passenger-oriented regional rail could be integrated into existing public-private partnerships like Chicago Region Environmental and Transportation Efficiency (CREATE) – a program of national significance that improves the way passengers and goods move by untangling North America’s busiest rail hub.⁴¹ Additionally, the IDOT Office of Intermodal Project Implementation (OIPI) should study potential opportunities to better align the use of freight rail-owned land with regional rail goals, as freight facilities include areas with significant TOD potential.

Implementation steps

Legislative actions:

- Direct IDOT to coordinate with Metra and other regional transit providers on opportunities to address freight / passenger conflicts
- Consider appropriating funds to support these investments

State agency actions:

- IDOT OIPI to conduct analysis to identify the most promising opportunities to better align use of freight rail owned land with regional rail goals, including relocation of major freight yards and/or purchase of private railroad ROW for public use
- Prioritize shared intercity and regional rail corridors, including access between O’Hare International Airport and downtown Chicago, within the State Rail Plan
- Coordinate activities undertaken by the newly formed Illinois High-Speed Railway Commission to advance shared intercity and regional rail corridors in a statewide context

Local/regional actions necessary to support:

- Metra to commit to operating additional rail service if capacity becomes available
- Identify priority corridors and potential service frequency levels (integrated with Metra’s Systemwide Network Plan)

⁴¹ CREATE, Our Projects, Accessed 2023. <https://www.createprogram.org/projects/>

- CREATE partners to consider a portfolio with “regional rail” lens

Rationale

- By considering regional rail-oriented upgrades in existing capital programs like CREATE, the region and State can share efficiencies
- Position regional rail investments to take advantage of unprecedented federal funding opportunities available for intercity passenger rail by advancing shared corridors where feasible
- Regional rail will not be possible in the same timeframe on all Metra corridors given existing freight conflicts, so consideration of freight is key
- Freight land uses often include areas with significant TOD potential

Evaluation

Policy

Category	Rating	Rationale
 Mobility	High	Removing freight interference will greatly improve service reliability and mobility throughout the region. Improved coordination means the more efficient movements of passengers and goods.
 Equity	Med	Reducing freight conflict in areas with significant delays and stalling trains will improve quality of life.
 Economy	High	Improving operations for both freight and passenger rail will result in operational savings and less money lost to deadhead trips or stalled trains/delays. Freight activity is also critical to state and regional economies, especially given northeastern Illinois’ prominence in the national rail system.
 Environment	Med	Less stalling and interference will reduce emissions. Remediation may be needed for contaminated sites.
 Regional benefit	Regional/ Suburban/ Urban	Suburban and urban areas are the ones with most freight and commuter rail conflicts, and these areas will see the most benefit. The regional system as a whole, including intercity passenger rail, will also benefit.

Process

Category	Rating	Rationale
 <p>Administrative feasibility</p>	Med	Coordination with state agencies, the governor’s office, and ILGA will be required to identify opportunities for negotiation. Local community opposition is possible.
 <p>Political feasibility</p>	Med	Challenging negotiations may need to be made with railroads and other stakeholders, and there may be some level of local community opposition.
 <p>Timing</p>	Long	This would be a long-term adjustment due to the administrative and legislative actions that would need to take place in advance.
 <p>State span of control</p>	Low	The state can support any analysis needed to identify areas for improvement and provide funding to support necessary investments. However, full implementation will require extensive partnerships with both public and private entities, including freight railroads.

Net cost / investment

Associated cost estimates, even at an order-of-magnitude level, depend on further study and preliminary scoping. They are likely to be highly scalable and may be informed by the availability of funding.

4. Establish complementary fare policies

As a complementary measure, the State can help better connect northeastern Illinois by reevaluating regional fare policies. Doing so would advance another regional priority, fare integration, through a cross-agency approach. The topic of fare integration is explored in a companion PART memo on the project [webpage](#).

A summary of recommendations is included below:

- **Unify fare system administration and payment methods.** The state should establish a structure that enables a fully integrated fare system, including a regional owner of fare policy decision-making and a fixed timeline for implementation. These requirements should be paired with the funding necessary to achieve full integration, including both initial capital and ongoing operations and maintenance.
- **Enable free or discounted interagency transfers.** The state should require that all regional transit service boards offer free or discounted transfers between services, including for both single-ride and multi-day pass products. The state should account for any potential revenue losses in the overall transit funding structure and empower the regional fare policy owner to oversee implementation.
- **Align fare structures across agencies for similar trips.** The state could extend the previous recommendation by requiring regional transit providers to align fare structures for similar trips (e.g., for travelers with options on both Metra and CTA for service between Rogers Park and downtown Chicago). As above, the state should also account for revenue losses and governance implications.
- **Integrate with complementary modes and systems.** The state should encourage and facilitate fare integration with other complementary modes, including other regional transit/rail service providers (e.g., South Shore Line, Amtrak), and micro-mobility (e.g., Divvy bike-share). The state should also expand data-sharing requirements for private mobility providers to better assess how they can support regional transit.

Appendix

Appendix 1. Equity Analysis

An equity analysis of the CMAP service area was conducted to understand how equity plays into the region's transit systems, particularly in how bus and rail compare in various equity metrics.

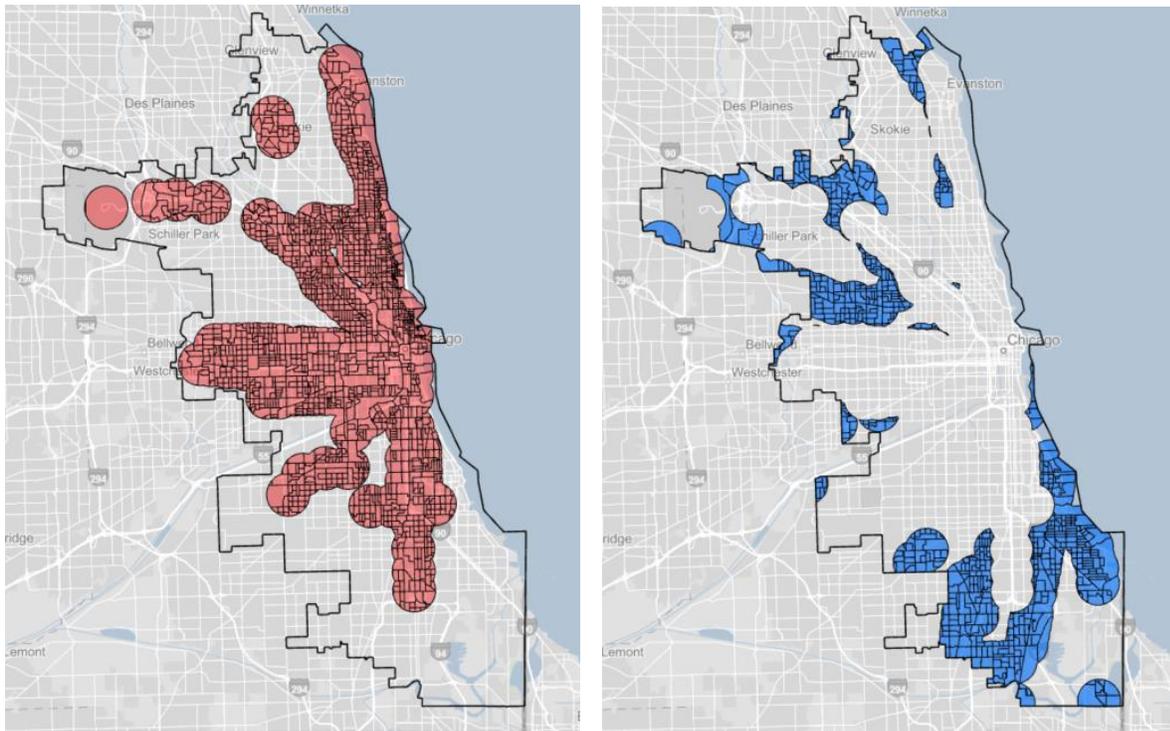
The following metrics were used in this analysis:

- Population
- Proximity to transit
- Median household income
- Race
- Commute time

This data was gathered from the U.S. Census American Community Surveys, using results from a block-group geography level. Both half-mile and one-mile buffers were considered to define which block groups are "served" by transit. Individual buffers were created for CTA Bus, Pace Bus, CTA Rail, and Metra.

The analysis geography (shown as the black outline on the **Figure 22** maps below) includes block groups within the City of Chicago, block groups intersecting any municipality with a CTA rail station, and any other block groups intersecting a one-mile buffer of CTA rail. Within this analysis geography, the left map shows the area within one mile of CTA, and the right map shows the area within one mile of Metra, but more than one mile from CTA rail.

Figure 22. Equity analysis geography for CTA Rail (Left) vs. Metra Rail (Right) areas.



Appendix 2. Case Studies

Toronto, Ontario, Canada

Figure 23. GO Transit train

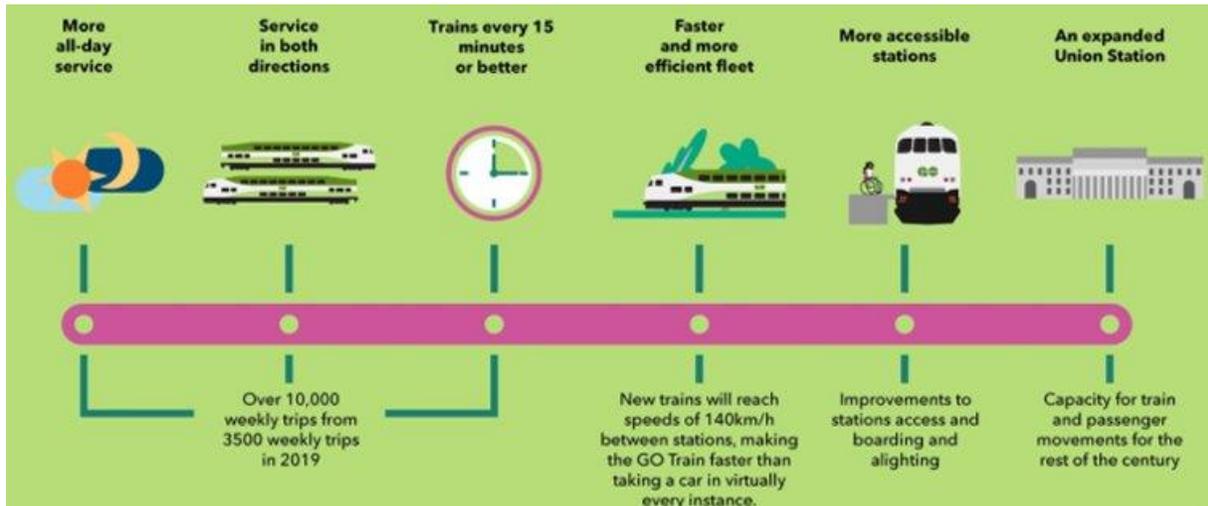


GO Transit is the regional transit operator in the Greater Toronto and Hamilton area, providing commuter rail and commuter/express bus services connecting to every other municipal transit system in the region, including the Toronto Transit Commission (TTC),⁴² which operates bus, subway, streetcar, and paratransit services in Toronto. GO Transit manages about 80 percent of the total railway network that its trains

(shown in **Figure 23**) operate on. By maintaining its own corridors, GO Transit has been able to implement improvements to bring GO Transit closer to a regional rail model.

GO Expansion is an \$11-billion program implemented to make the network better and faster, as well as making the region easier to travel in. The timeline in **Figure 24** shows some of its key features.

Figure 24. GO Expansion timeline⁴³



⁴² City of Toronto, Public Transit in Toronto, Accessed 2023. <https://www.toronto.ca/services-payments/streets-parking-transportation/transit-in-toronto/>

⁴³ Metrolinx, GO Expansion, Accessed 2023. <https://www.metrolinx.com/en/projects-and-programs/go-expansion>

This project will expand service by offering more service in the off-peak and weekend timeframes, as well as in off-peak directions. Faster, electric trains will improve the speed of trips, and the Union Station expansion will allow for more frequency.

Boston, Massachusetts

Boston's public transportation service is governed by the MBTA, a state agency that provides subway, bus, commuter rail, ferry, and paratransit service to eastern Massachusetts and parts of Rhode Island.⁴⁴

As a part of MBTA's Rail Vision initiative, MBTA evaluated how commuter rail could operate in the future. The Rail Vision ultimately endorsed electrification, higher frequency service, greater accessibility, and lower fares as the path forward for rail transit in the Boston region. It also identified priority lines and elements of transformation, as well as outlining key elements for further assessment.⁴⁵

As sharing railway assets between passenger and freight can cause difficulty, MassDOT decided to purchase freight rail assets to improve passenger service. In 2008, after difficult negotiations spanning years, the State reached an agreement to purchase a number of freight lines into Boston that have current or potential future passenger service from CSX.⁴⁶ This was expected to increase speed, frequency, and reliability of commuter rail service within the Boston area. Furthermore, the State also helped CSX completely vacate its main freight yard in Boston, moving its bulk commodity transfer facility out to Westborough.⁴⁷ This was planned to help expand rapid transit options around Boston and provide rail service to residents in the area around Allston-Brighton, as well as opening the door for the development of many acres of land into the future.⁴⁸

Through these developments, the State of Massachusetts, and the City of Boston hope to provide better transportation options for residents and stitch together a community previously divided by freight railways. This can be achieved by procuring federal funds to, among other things, adjust the turnpike to run alongside the commuter rail tracks, allow development on decks that go above the highway and tracks, and build a new transportation hub.⁴⁹

⁴⁴ MBTA, How to Ride the MBTA: The Basics, Accessed 2023. <https://www.mbta.com/about/how-to-ride-the-mbta-the-basics>

⁴⁵ MBTA, Rail Vision, Accessed 2023. <https://www.mbta.com/projects/rail-vision>

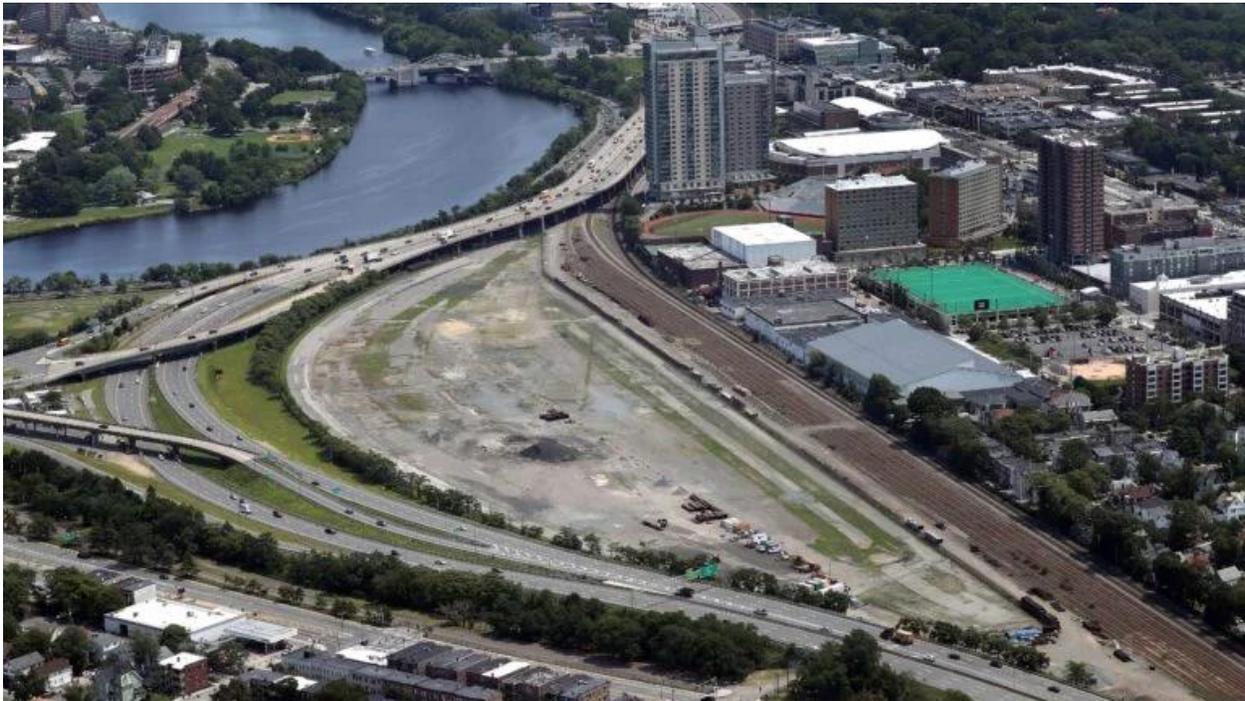
⁴⁶ Telegram & Gazette, State to buy Worcester-Boston rail line, 2008. <https://www.telegram.com/story/news/local/east-valley/2008/10/02/state-to-buy-worcester-boston/52247539007/>

⁴⁷ Railway Track and Structures, CSX opens new TRANSFLO facility in Westborough, 2012. <https://www.rtands.com/freight/class-1/csx-opens-new-transflo-facility-in-westborough/>

⁴⁸ The Harvard Crimson, State To Take Over Allston Railyards, 2009. <https://www.thecrimson.com/article/2009/9/25/state-to-take-over-allston-railyards/>

⁴⁹ The Boston Globe, Wu hails opportunity at Allston railyard, 2022. <https://www.bostonglobe.com/2022/06/01/business/wu-hails-opportunity-allston-railyard/>

Figure 25. The former Allston Railyard in Boston, now 100 acres of developable land



Paris, France

The RER in Paris is a regional railway system covering the majority of the Île-de-France region. It connects outer suburbs with Paris proper, and while the train passes through Paris it operates much like a metro, although with significantly fewer stops so that it can pass through Paris quickly.⁵⁰ It also runs as an express underground train throughout the city, while it turns into a ground level commuter train outside of the city.⁵¹ The RER thus serves to complement the Paris Metro, rather than competing with it.⁵²

The pricing for tickets on the RER is determined via a fare zone system. Zone 1 is the city proper, where basic Paris Metro tickets work for RER travel. The other zones beyond Zone 1 are for stops outside the city and are priced differently on a station-to-station basis. There are also options for day and week passes, some of which work for all zones and some of which are zone-specific.⁵³ Tickets on the RER have to be scanned through the automatic barriers both on entry and when exiting from the station. If the RER station the rider exits from has a connection with the Paris Metro, the ticket can be used for it as well.⁵⁴

⁵⁰ Paris Tourist Office, RER and transilien in Paris, Accessed Jun 2023. <https://en.parisinfo.com/practical-paris/getting-to-paris/Parisinfo-your-guide/rer-transilien>

⁵¹ Paris by Train, Paris RER, 2022. <https://parisbytrain.com/paris-rer/>

⁵² Civitatis Paris, RER, Accessed 2023. <https://www.introducingparis.com/rer-train>

⁵³ Paris by Train, Paris RER, 2022. <https://parisbytrain.com/paris-rer/>

⁵⁴ Paris Tourist Office, RER and transilien in Paris, Accessed Jun 2023. <https://en.parisinfo.com/practical-paris/getting-to-paris/Parisinfo-your-guide/rer-transilien>

Bay Area, California

Caltrain is a commuter rail system serving cities in the Bay Area of California, chiefly San Francisco. In order to improve system performance, California has pursued the Caltrain Modernization (CalMod) Program, a key component of which includes the Caltrain Electrification Project. This will electrify a whole corridor of service, stretching from San Francisco's 4th and King Caltrain Station to the Tamien Caltrain Station, as well as increasing service and maintaining operation speeds of up to 79 mph.⁵⁵ Caltrain Electrification is the first time in decades that diesel trains and their associated infrastructure elements are being replaced with an electric system. The new train cars will also have a substantial number of upgrades such as wi-fi, outlets at every seat, digital displays, more storage, and baby-changing tables.⁵⁶ Caltrain Electrification is expected to help reduce noise, improve air quality, and lower greenhouse gas emissions, as well as increasing service and improving travel times throughout the region.⁵⁷

Caltrain and the California High-Speed Rail (HSR) system, which will go from San Francisco to Los Angeles, will function as a "blended system" at the bookend stops in the north and south. In the northern bookend, in the stretch of railway from San Francisco to San Jose, the corridor will predominantly operate on shared tracks. While the Caltrain Electrification project will not directly provide high-speed service, its implementation and that of the HSR service are intertwined and dependent on each other's progress.⁵⁸ Ultimately the blended system of service and infrastructure between Caltrain and HSR will further the regional rail aspect of both services.

⁵⁵ CalMod, Program Overview, Accessed 2023.

<https://web.archive.org/web/20190605124542/https://calmod.org/>

⁵⁶ Railway Track and Structures, Caltrain Suspends Service in San Francisco Ahead of Electrification Project, 2023.

<https://www.rtands.com/passenger/Caltrain-suspends-service-in-san-francisco-ahead-of-electrification-project/>

⁵⁷ Caltrain, Electrification Program Overview, Accessed 2023. <https://www.caltrain.com/projects/electrification>

⁵⁸ Caltrain, Local Policy Maker Group Handbook, 2023. <https://www.caltrain.com/media/28623/download>

Figure 27. Map of California High-Speed Rail with integrated Caltrain portions

